

### REMARKS

Claims 1 through 22 are now pending in the application. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

### REJECTION UNDER 35 U.S.C. § 102

Claims 1, 5, 7-9 and 12 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Dahlbacka (U.S. Pat. No. 5,344,215). This rejection is respectfully traversed.

At the outset, Applicants respectfully note that Claims 1 and 8 have been amended to further include that "said plurality of teeth of said recliner rod selectively engaged with said latching mechanism when said latching mechanism is in said latched position". Applicants respectfully note that Dahlbacka fails to teach or suggest such a configuration.

Applicants respectfully note that the present invention teaches a recliner rod slidably supported within a housing and selectively fixed from sliding movement by a latching mechanism. The recliner rod includes a top face having a plurality of teeth formed therein and with which the latching mechanism selectively engages to prohibit axial sliding movement of the recliner rod relative to the housing. The latching mechanism is supported by the housing and is actuable to engage or disengage the teeth of the recliner rod.

In contradistinction, Dahlbacka teaches a recliner mechanism including a housing slidably supporting a recliner rod, whereby ***the housing*** is actuable for

selectively engaging the recliner rod to prohibit sliding movement thereof. The Dahlbacka recliner mechanism further includes a head for pressing the recliner rod into engagement with the housing, whereby both the recliner rod and housing include teeth respectively formed in each. In order to enable sliding motion of the recliner rod relative to the housing, the Dahlbacka device requires that **both the head and the housing be actuated**, whereby the housing itself rotates relative to the recliner rod to disengage therefrom.

Applicants respectfully note that the present invention is patentably distinct from that taught in Dahlbacka and includes particular advantages of reduced complexity and ease in manufacture. These advantages are achieved through the interaction between the components of the recliner mechanism and the simplified form of the housing. Specifically, the recliner mechanism of the present invention includes only one moving component for enabling sliding movement of the recliner rod, whereas the recliner mechanism of Dahlbacka requires both movement of the head and the housing for enabling sliding movement of the recliner rod. Further, Dahlbacka requires a series of teeth to be integrally formed with the housing. This results in a more complex and more difficult to manufacture housing, increasing overall cost.

In view of the claims, as amended, and the distinctions outlined above, Applicants respectfully assert that Claims 1 and 8 are patentable over the disclosure of Dahlbacka. Therefore, reconsideration and withdrawal of the rejections are respectfully requested.

With respect to Claims 5, 7, and 12, Applicants respectfully note that each is dependent upon independent Claims 1 and 8, discussed just previously. Claims 5, 7,

and 12 are at least as limited as Claims 1 and 8, and therefore similarly define over the prior art. Reconsideration and withdrawal of the rejections are respectfully requested.

With regard to Claim 9, Applicants respectfully note that Claim 9 has been cancelled without prejudice or disclaimer of the subject matter therein. Therefore, Applicants respectfully submit that the rejection to Claim 9 has been rendered moot.

#### **REJECTION UNDER 35 U.S.C. § 103**

Claim 4 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Dahlbacka (U.S. Pat. No. 5,344,215). This rejection is respectfully traversed.

With regard to Claim 4, Applicants respectfully note that Claim 4 is dependent upon independent Claim 1, and therefore similarly defines over the prior art. Applicants respectfully request reconsideration and withdrawal of the rejection.

Claims 2, 3, 6, 10, 11 and 13 - 20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Dahlbacka (U.S. Pat. No. 5,344,215) in view of Martone et al (U.S. Pat. No. 5,618,083). This rejection is respectfully traversed.

With respect to Claims 2, 6 and 10, Applicants respectfully note that each is dependent upon independent Claims 1 and 8, as discussed above. Further, Applicants respectfully note that Martone et al fails to cure the deficiencies of Dahlbacka with respect to Claims 1 and 8. Therefore, Claims 2, 6 and 10 similarly define over the prior art, and reconsideration and withdrawal of the rejections are respectfully requested.

With respect to Claim 3, 11, 13 and 18, the Examiner asserts that Dahlbacka teaches all of the features and steps of Claims 3, 11, 13 and 18 except the formation of an integral stop from the recliner rod, and further that such a stop formation would be obvious in view of Martone et al.

Applicants respectfully note that Dahlbacka fails to teach or suggest an **integral stop** associated with the recliner rod. As described above, Martone et al teaches a stop pin disposed through the recliner rod, for limiting the sliding motion of the recliner rod relative to the housing. The stop pin of Martone et al is a separate component disposed through the recliner rod and not integrally formed therewith. Thus, Applicants respectfully note that Martone et al fails to teach or suggest deformation of the recliner rod for forming a stop, and in fact teaches away from such a formation of a stop as it specifically teaches that the stop is formed from a stop pin disposed through the recliner rod. Accordingly, reconsideration and withdrawal of the rejections are respectfully requested.

With respect to Claims 14 - 17, Applicants respectfully note that each is dependent upon independent Claim 13, as discussed above. Further, Applicants respectfully note that Martone et al fails to cure the deficiencies of Dahlbacka with respect to Claim 13. Therefore, Claims 14 - 17 similarly define over the prior art, and reconsideration and withdrawal of the rejections are respectfully requested.

Note, also, that Claim 14 has been amended to correct a grammatical error. This amendment does not alter the scope of the claim and should not be considered limiting.

Applicants respectfully note that Claims 19 and 20 are dependent upon independent Claim 18, as discussed above. Claims 19 and 20 similarly define over the prior art, and reconsideration and withdrawal of the rejections are respectfully requested.

Claims 21 and 22 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Dahlbacka (U.S. Pat. No. 5,344,215) in view of Fisher IV (U.S. Pat. No. 5,823,622). This rejection is respectfully traversed.

Applicants respectfully note that Claims 21 and 22 are respectively dependent from independent Claims 1 and 8. Applicants further note that Fisher IV fails to cure the deficiencies of Dahlbacka with respect to Claims 1 and 8, as discussed above. Because Claims 21 and 22 similarly define over the prior art, reconsideration and withdrawal of the rejections are respectfully requested.


### **CONCLUSION**

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the

Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

Dated: October 30, 2001

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1/17/02

## ATTACHMENT FOR CLAIM AMENDMENTS

The following is a marked up version of each amended claim in which underlines indicates insertions and brackets indicate deletions.

1. (TWICE AMENDED) A linear seat recliner for use in a motor vehicle having a seat with a seat back pivotally connected to a seat bottom, the seat being operable in a plurality of use positions ranging from an upright position to a fully reclined position, the linear seat recliner comprising:

a housing adapted to be coupled to one of the seat back and the seat bottom;

a latching mechanism coupled to said housing and actuatable relative said housing between a latched position and an unlatched position; and

a recliner rod including a body having a first end and a second end, said body having a substantially planar top flat diametrically opposed and parallel to a substantially planar bottom flat, said top flat including a plurality of teeth positioned at said first end of said body, said [first end] plurality of teeth of said recliner rod selectively engaged with said latching mechanism when said latching mechanism is in said latched position and said second end of said recliner rod adapted to be coupled to the other of the seat back and the seat bottom; and

wherein said latching mechanism prevents relative axial movement of said recliner rod when in said latched position and said latching mechanism allows relative axial movement of said recliner rod when in said unlatched position.

2. The linear seat recliner of Claim 1 wherein said recliner rod is adapted for sliding from a first position corresponding to the fully reclined position to a second position corresponding to the upright position, said recliner rod including a stop engaging said housing when said recliner rod is in said first position.

3. The linear seat recliner of Claim 2 wherein said stop is integrally formed in said recliner rod.

4. The linear seat recliner of Claim 1 wherein said body of said recliner rod has a hexagonal cross section.

5. The linear seat recliner of Claim 1 wherein said housing includes a guide mechanism supporting said bottom flat of said recliner rod.

6. The linear seat recliner of Claim 5 wherein said guide mechanism includes a plurality of rivets coupled to said housing.

7. The linear seat recliner of Claim 1 wherein said top flat and said bottom flat extend substantially between said first and second ends.

8. (TWICE AMENDED) A reclining seat assembly comprising:  
a seat bottom having a side rail;  
a seat back having a support rail pivotally coupled to said side rail;



a linear seat recliner including a housing secured to one of said side rail and said support rail;

a recliner rod having a first end supported for relative linear motion within said housing and a second end having an aperture, said recliner rod having a substantially planar top flat having a plurality of teeth formed therein and a substantially planar bottom flat positioned parallel thereto, said second end pivotally coupled to the other of said side rail and said support rail; and

a latching mechanism coupled to said housing and actuatable relative said housing between a latched position where said latching mechanism engages said teeth to prevent [prevents] relative axial movement of said recliner rod and an unlatched position where said latching mechanism allows relative axial movement of said recliner rod.

9. (CANCELLED)

10. The reclining seat assembly of Claim 8 wherein said recliner rod includes a stop radially protruding from said first end for restricting the linear motion of said recliner rod relative to said housing.

11. The reclining seat assembly of Claim 10 wherein said stop is integrally formed to said first end of said recliner rod.

12. The reclining seat assembly of Claim 8 wherein said recliner rod is supported by a plurality of rivets.

13. A recliner rod for a linear seat recliner for use in a seat having a seat back pivotally connected to a seat bottom, the seat operable in a plurality of use positions ranging from an upright position to a fully reclined position, the linear seat recliner having a housing coupled to one of the seat back and the seat bottom, the linear recliner mechanism also having a latching mechanism coupled to the housing, the recliner rod comprising:

a body having a first end and a second end, said body further having a top flat diametrically opposed and substantially parallel to a bottom flat;

a paddle integrally formed with said body at said second end;

a stop integrally formed with said body at said first end;

a plurality of teeth positioned on said top flat, said plurality of teeth adapted to be engaged by the latching mechanism, said second end adapted to be coupled to the other of the seat back and the seat bottom.

14. (AMENDED) The recliner rod of Claim 13 wherein said top and bottom flats [extending] extend from said first end to said second end.

15. The recliner rod of Claim 13 wherein said recliner rod is adapted to slide relative to the housing.

16. The recliner rod of Claim 15 wherein said stop is adapted to engage the housing to limit the travel of said recliner rod relative to the housing.

17. The recliner rod of Claim 16 wherein said stop is adapted to engage the housing when the seat is in the fully reclined position.

18. The method of forming a recliner rod for a linear seat recliner for use in a seat having a seat back pivotally connected to a seat bottom, the seat being operable in a plurality of use positions ranging from an upright position to a fully reclined position, the linear seat recliner having a housing coupled to one of the seat back and the seat bottom, the linear recliner mechanism also having a latching mechanism coupled to the housing, the method comprising the steps of:

providing a recliner rod blank having a first end, a second end, a top flat, and a bottom flat substantially parallel to said top flat;

deforming said second end of said blank to define a paddle adapted to be coupled to the other of the seat back and the seat bottom;

deforming said first end of said blank to define a stop adapted to engage the housing when the seat is in its fully reclined position; and

forming a set of teeth on said top flat, said set of teeth adapted to be selectively engageable by the latching mechanism.

19. The method of Claim 18 wherein said step of providing said recliner rod blank includes extruding said blank.

20. The method of Claim 18 wherein said step of defining top and bottom flats includes coining said body.

21. The linear seat recliner of Claim 1 wherein said second end of said recliner rod includes a ball joint assembly to couple the recliner rod to the other of the seat back and the seat bottom.

22. The reclining seat assembly of Claim 8 wherein said second end of said recliner rod includes a ball joint assembly to pivotally couple the recliner rod to the other of said side rail and said support rail.